

ISSUANCE TRANSMITTAL
SHEET

N A S A
National Aeronautics and
Space Administration

George C. Marshall Space Flight Center
Marshall Space Flight Center, Alabama 35812

Issuance Number: MMI 6400.1D	Date: December 19, 1988
---------------------------------	----------------------------

Material Transmitted:

1. Management Instruction MMI 6400.1D, "Inspection of Government-Furnished Equipment for Shipment from MSFC or Other Designated Areas"
2. This instruction has been revised to:
 - a. Update organizational references and reference documents;
 - b. Clarify responsibilities of SRM&QA Office and those of the other MSFC organizations involved; and
 - c. Make editorial changes to improve overall clarity of the instruction.

Filing Instructions:

Remove MMI 6400.1C and replace with MMI 6400.1D.

MANAGEMENT
INSTRUCTION

N A S A
National Aeronautics and
Space Administration

George C. Marshall Space Flight Center
Marshall Space Flight Center, Alabama 35812

Originating Organization: CQ01	Effective Date: December 19, 1988	MMI: 6400.1D
--------------------------------	-----------------------------------	--------------

Subject: Inspection of Government-Furnished Equipment for Shipment From MSFC or Other Designated Areas

1. PURPOSE

To establish a MSFC procedure governing inspection of government-furnished quality sensitive, and designated non-quality sensitive, equipment to be shipped to government agencies, other centers, contractors, or subcontractors.

2. APPLICABILITY

This instruction applies to all MSFC organizational elements and to onsite MSFC contractors. This instruction does not apply to shipment of explosives or hazardous materials.

3. REFERENCES (Only applicable parts of most recent edition apply.)

- a. MM 4000.1, "MSFC Supply Manual"
- b. NHB 5300.4 (1D-2), "Safety, Reliability, Maintainability and Quality Provisions for the Space Shuttle Program"
- c. MMI 5310.1, "Reliability and Quality Assurance (R&QA) Surveys"
- d. S&E 5330.6, "MSFC Nonconformance Reporting System"
- e. S&E 5330.8, "MSFC Deviation/Waiver Authorization System"

- f. NHB 6000.1, "Requirements for Packaging, Handling, and Transportation for Aeronautical and Space Systems, Equipment and Associated Components"
- g. MMI 6400.2, "Packaging, Handling, and Moving Program Critical Hardware"
- h. SS-SRD-0001, "Space Station Program Definition and Requirements"

4. POLICY

- a. Government-furnished equipment being transferred by the MSFC Supply and Equipment Management Officer to another NASA Center or government agency, or, upon approval of the Contracting officer, to contractors or subcontractors, will be inspected as stated herein before or during preparation of shipment to ensure that the property complies with technical and packaging requirements.
- b. All quality sensitive items will require technical and packaging inspection prior to shipment to assure compliance with NHB 6000.1.
- c. Each organization involved with Program Critical Hardware (PCH) will comply with requirements in MMI 6400.2.

5. DEFINITIONS

Definitions of terms, acronyms, and processes used within this document concerning the inspection of quality sensitive equipment are contained in attachment A.

6. RESPONSIBILITIES AND PROCEDURES

- a. The individual office/organization requirements deemed necessary for the inspection of government-furnished equipment are presented in attachment B.

- b. Additional information to be included on MSFC Form 57 (Shipping Document) is furnished in attachment C.

7. SHIPPING DOCUMENT WAIVERS

When the cognizant program/project manager writes a waiver per this MMI, he/she will use a MSFC Form 476, "Nonconforming Item Authorization." (See S&E 5330.8.)

8. CANCELLATION

MMI 6400.1C, dated March 23, 1977

ORIGINAL SIGNED BY
James R. Thompson, Jr.
Director

Attachments:

- A. Definitions
- B. Responsibilities and Procedures
- C. Additional Information to be Included on MSFC Form 57

Distribution:

SDL 3

Attachment A

DEFINITIONS

1. Government Property: Property owned by the government, leased to the government, or acquired by the government under terms of any contract or agreement. Government property includes government-furnished equipment/property.
2. Quality Sensitive: A term used to identify flight hardware and flight associated Ground Support Equipment (GSE), including items to be assembled into a launch vehicle and associated equipment for testing, moving, handling, launching, and maintaining a vehicle in space. This term also applies to qualification and requalification hardware and hardware for development testing, where the resultant test data has a significant effect on the final flight or flight associated hardware design. NOTE: Some, but not all, quality sensitive hardware is also program critical hardware.
3. Material Review Disposition (MRD): Documentation listing the findings of a material review.
4. Non-Quality Sensitive: A term to identify equipment, hardware, or material not directly related to flight systems (e.g., mock-up, industrial machinery, office equipment, documentation.)
5. Program Critical Hardware: That hardware uniquely critical to a flight-project schedule or mission because the hardware is designed to provide the fundamental function (structure, power, etc.) without which successful completion of the project's other hardware cannot be achieved. NOTE: All program critical hardware is quality sensitive.

6. Data Package: Document which accompanies property showing historical background of that property relative to technical descriptions, test results, environmental factors, inspection results, etc.
7. MSFC Form 57, Shipping Document: Form used to document shipment of government property and/or vendor-owned property from MSFC.
8. MSFC Form 424, Project Institutional Requirements: Form used to initiate transactions for travel, project institutional procurements, facility work requests, fabrication services, one-time repairs, telecommunications, shipment of equipment, and ordering of residual inventory items.
9. MSFC Form 312, Inspection Report: Form used to report inspection results on vehicle hardware and vehicle checkout.
10. MSFC Form 362, Packaging, Handling, and Transportation Record: Form used to define packaging, handling, and transportation data for program critical hardware.
11. MSFC Form 476, Deviation/Waiver Forms Guide: Form used to document and process waivers of nonconforming quality sensitive hardware.

Attachment B

RESPONSIBILITIES AND PROCEDURES

1. The Requesting Organization will:
 - a. Prepare MSFC Form 424 for Science and Engineering (S&E) elements or memorandum in accordance with MM 4000.1 and ensure that information shown as attachment C is included as applicable. The terms Quality Sensitive and Non-Quality Sensitive are defined in attachment A;
 - b. Route items to the Property Management Division or contact them for all packaging, crating, and handling of off-site shipments;
 - c. Obtain a waiver statement (block 12 on Form 57 following item description, also see Paragraph 7 of this MMI) signed by cognizant program/project manager on any shipment which deviates from this MMI;
 - d. Prepare a data package and index to accompany both quality sensitive and non-quality sensitive items during preshipment inspections by the Product Evaluation Branch and the Property Management Division. Data package contents will be governed by program/project requirements in effect at the time a data package is to be assembled for shipment with hardware. As an example, data packages prepared for Shuttle hardware will be subject to Shuttle Level II requirements; i.e., JSC Spec. SN-D-0007. A copy of the data package is to be maintained on file at MSFC until the hardware and its accompanying data package has been transferred to the recipient's property record; and
 - e. Hardware rejections, such as damaged or defective parts, should be dispositioned per S&E 5330.6, as required.

2. Property Management Division, Management Operations Office will:
 - a. Prepare MSFC Form 57 based on data submitted on MSFC Form 424 (for S&E elements) or based on data contained in memorandum from other organizational elements external to S&E;
 - b. Prepare MSFC Form 57 in accordance with MM 4000.1;
 - c. When requested, present quality sensitive items and documentation to the Safety, Reliability, Maintainability, and Quality Assurance (SRM&QA) Office Product Assurance Division for inspection, prior to packaging and shipping; and
 - d. Obtain the signature of the authorized carrier on the master copy of MSFC Form 57 for items scheduled to be handcarried offsite.
3. Transportation Management Division, Management Operations Office will:
 - a. Select type of equipment or commercial carrier to perform off-center movement in the most direct, safe, economical and efficient manner;
 - b. Provide government-owned vehicles for local drayage and emergency line haul movement when required for safety or when commercial service is not available;
 - c. Provide NASA or other government aircraft service when delivery requirements cannot be satisfied by other means;
 - d. Provide for adequate security for the movement of any shipment which requires safeguarding because of its classified nature;and

- e. Obtain those clearances for all overweight and oversized movements by highway and railroad which are necessary to ensure the safe transportation of government materials.
4. Safety, Reliability, Maintainability, and Quality Assurance Office (SRM&QA) will:
- a. Prior to packaging and crating, inspect quality sensitive items. Assure MSFC Form 312 (as required, or other acceptance documents), evidencing inspection/test performance, is included with the data package;
 - b. Perform packaging and crating inspection on non-quality sensitive items when required by the responsible organization;
 - c. Notify the requesting organizational element of rejected items including a statement of reasons for rejection;
 - d. Periodically audit/survey shipping operations for compliance by the SRM&QA Office, Product Assurance Division, per NHB 6000.1 and MMI 5310.1; and
 - e. Establish and maintain status of all quality sensitive hardware shipped from or within MSFC.

Attachment C

ADDITIONAL INFORMATION TO BE INCLUDED ON MSFC FORM 57

1. Quality Sensitive Items

NOTE: All material shipped will be itemized on MSFC Form 57 and its continuation sheets.

- a. Description of item to be shipped
- b. Program Identification Codes on all Shipping Documents
- c. Part numbers, revision letters, serial numbers, and Material Review Authorization (outstanding MRD numbers)
- d. Whether item to be shipped is considered program critical hardware per MMI 6400.2
- e. Unit cost of items to be shipped
- f. Appropriate level of packaging and class of shipment in accordance with NHB 6000.1 and MSFC Form 362* (When recording devices are part of the shipment, special handling requirements are to be noted on MSFC Form 57.)
- g. Statement on MSFC Form 57 that MSFC inspection has been performed and list inspection report number of MSFC Form 312 as required, or other acceptance documents
- h. Data package contents listed on or attached to Form 57
- i. Name and office symbol of individual originating the request

2. Non-Quality Sensitive Items

- a. Description of item to be shipped
- b. Intended use, e.g., mock-up, test, development, modification, repair, test, and return
- c. Statement that "no technical inspection required - recipient will accept 'as is,'" and the name of the concurring recipient

* MSFC Form 362 is valid for one cycle of transportation only i.e., from point of origin to one destination only. —